

QUARTERLY LETTER OF INFORMATION OF THE FEDERAL HORTICULTURAL BOARD.

UNITED STATES DEPARTMENT OF AGRICULTURE.

No. 27.

APRIL, 1918.

GENERAL NOTES.

Pink bollworm field work in Texas.—The destruction and clean-up of cotton in and surrounding the districts in Texas invaded by the pink bollworm is now practically completed for the crop of 1917. The following summary of this work is condensed from a report prepared by Mr. F. S. Puckett for Dr. Hunter:

A total of 8,794 acres of cotton land has been cleaned of standing and scattered cotton at an average cost of \$9.94 per acre.

The cotton fields cleaned represent 657 owners or tenants, or an average of 13.38 acres to each owner or tenant. Most of the fields consisted of from one to one-half dozen acres, and only in a few instances did the fields approach or exceed 100 acres.

In addition to the clean-up of these cotton fields within and surrounding the known infested areas, all the gins in this section, some 20 in number, have also been subjected to a thorough cleaning, with a destruction of remaining and scattered seeds.

An effort has also been made, which has been substantially successful, to collect and mill under supervision all cotton seed grown in this section, and the lint cotton has been shipped to foreign countries via Galveston. These several steps have eliminated so far as is now possible the chance of overwintering and reinfestation of the new crop by the pink bollworm hibernating in the cotton fields or in cotton seed or in lint cotton of the crop of 1917.

Under the recently enacted Texas law, proclamations have been issued by the governor of Texas quarantining the known infested districts in Texas, namely, the Hearne district and the large district surrounding Trinity Bay and including Beaumont. Supplementing this action, these same districts have been established by proclamations of the Governor as cotton-free areas. Within these areas the growing of cotton is designated a public menace and is prohibited "for a term of three years or so long as such condition of menace to the cotton industry shall be deemed to exist." A border cotton-free zone has also been established by proclamation of the Governor to include the counties of Kinney, Maverick, and Valverde, as a result of the determination of infestation of cotton lands in Mexico within 25 miles of the Texas-Mexican border, opposite Eagle Pass and Del Rio. In these counties the growth of cotton is similarly prohibited for a period of three years.

Miscellaneous notes.—The agricultural appropriation bill now in conference carries an item of \$500,000 for the pink bollworm work in Texas and Mexico, including the border inspection service. This is in addition to the regular appropriation of \$75,000 for the routine work of the Federal Horticultural Board.

Foreign and domestic quarantines were promulgated March 15, 1918, effective April 1, 1918, prohibiting the further entry into the United States from all foreign countries of banana plants, and extending the same prohibitions to Hawaii and Porto Rico. These quarantines have reference particularly to the banana root borer (Cosmopolites sordidus Germar), which has already been found in two limited localities in Florida. Work now under way, under the direction of, and in cooperation with, Mr. Newell, will probably lead to its extermination at these points.

A possible new subject of quarantine is the corn-stalk borer recently introduced into New England from Europe, apparently in connection with importations of hemp brought to the mouth of the Mystic River, inasmuch as the infestation seems to be confined to towns near the mouth of this river. This insect, from the extent of territory already covered and its wide range of food plants, may possibly have gotten beyond quarantine action. It is being investigated by Massachusetts entomologists in cooperation with the Bureau of Entomology of this Department.

A notice of public hearing on proposed restrictions or prohibitions with respect to the importation of plants and seeds from foreign countries was issued March 28, 1918. This hearing is called for May 28 and has in view particularly the question of prohibiting or restricting the further entry of plants imported with earth about the roots and plants from little-known and little-explored countries of the world, and as to which there is almost a complete dearth of information concerning insect pests and plant diseases.

.C. L. MARLATT, Chairman of Board.

NOTES ON ENTOMOLOGICAL INTERCEPTIONS.

The pink bollworm (*Pectinophora gossypiella*) is recorded in this letter in cottonseed from Natal do Norte, Brazil. The shipment in question, consisting of 1,992 bags, was sent in in violation of the cotton regulations and as a result was returned to the port of origin. According to information recently received through the Department of State, the entire shipment, upon its return to the port of origin, was immediately destroyed by the Brazilian Government on account of the infestation referred to.

Two nests of the brown-tail moth were taken on apple stock from France, and a soft scale, Lecanium pulchrum, was collected on gooseberry from the same country. So far as known, this scale insect does not occur in the States. In Europe it is reported to infest shade, forest, and nut trees and shrubs. The Hart scale (Targionia hartii), which is frequently a pest in the West Indies, was brought in on tubers of Colocasia esculenta. Guatemalan avocado seeds have again been received infested with larvæ of an undescribed Conotrachelus, and also larvæ of a species of Stenoma. These insects were briefly referred to in Letter of Information No. 24, issued May 15, 1917.

The lesser bulb fly (*Eumerus strigatus*), together with the narcissus fly (*Merodon equestris*), was collected in considerable numbers in narcissus bulbs, from Holland, at Washington, D. C. The lesser bulb fly was also sent in for identification by one of the large seed firms of Philadelphia, taken in Holland-grown narcissus bulbs. It is now known to be established in the States of California, Washington, Colorado, and Maine. Although the economic status of the lesser bulb fly is in dispute, Verrall in British Flies, volume VIII (1901), says "The European *E. strigatus* has been bred from bulbs of the common onion (*Alliun cepa*), of which they sometimes destroy a whole crop."

E. R. Sasscer, Chief Inspector.

NOTES ON PATHOLOGICAL INTERCEPTIONS.

This quarter's report is perhaps most noticeable for the variety of pathogenic organism represented in the list. In the 76 pathological collections reported, 41 species of fungi and bacteria are represented. This large number indicated how varied are the attacks made by the foreign pests on American agriculture.

Crown gall caused by *Bacterium tumefaciens* is the organism most frequently reported by the State inspectors. This is probably not only because of its abundance, but because it is the most easily recognized disease.

Citrus canker was caught four times by the Federal inspectors at New York, on grapefruits and oranges from China, and once by the Federal inspector at Seattle, on oranges from the same country.

The findings in the District of Columbia of the wheat rust, *Puccinia graminis*, on grass used in packing nursery stock from France, calls attention to the ever-present danger of diseases being imported not only on nursey stock itself, but on plant material used for packing in the nursery and other industries.

R. Kent Beattie, Chief Pathological Inspector.

LIST, BY COUNTRIES, OF PESTS COLLECTED AND REPORTED FROM DEC. 31, 1917, TO MAR. 31, 1918. INCLUSIVE.

Country of origin and name of pest.	Host.
ARGENTINA.	
Insect: Diaspis sp. (scale insect)	Echinopsis sylvestri.
AUSTRALIA. Diseases:	
Bacterium phaseoli. Cryptosporella sp.	Phaseolus sp. Eleocarpus reticulatus.
BRAZIL.	
Insects: Alphitobius piceus (Tenebrionidae) Bruchus sp. (weevil) Carpophilus dimidiatus (Nitidulidae). Catarama sp. (Ptinidae). Laemophloeus minutus (Cucujidae). Lophocateres pusillus (Siamese grain beetle). Pectinophora gossypiella (pink bollworm). Rhynchophorus sp. (t alandridae). Tenebroides sp. (Trogositidae). Tribolium ferrugineum (rust-red flour beetle).	Cotton seed. Do. Do. Do. Do. Jaboticaba seed. Cotton seed.
CANADA. Insects:	
Lecanium corni (European fruit Lecanium) Lepidosaphes ulmi (oyster-shell scale)	Ribes rubrum. Do.
Disease: Hormiscium sp	Ribes sp.
CELEBES, EAST INDIES.	
Insects: Calandra oryza (rice weevil) Tribolium ferrugineum (rust-red flour beetle)	
CHINA.	
Insects: Bruchus chinensis (weevil). Chionaspis citri (scale insect). Coccus hesperidum (soft brown scale). Diaspis pentagona (West Indian peach scale) Lepidosaphes beckii (purple scale). Parlatoria pergandei (chaff scale)	Citrus. Prunus, ?. Citrus. Do.
Phenacaspis sp. (scale insect). Pseudaonidia paeoniae (scale insect). Psocid eggs. Scatopse atrata (Bibionidae). Sciara sp. (Mycetophilidae). Tribolium confusum (confused flour beetle).	Do. Eucommia ulmoides. Lilium sp. Do.

Country of origin and name of pest.	Host.
CHINA—continued. Diseases:	
Bacterium tumefaciens (crown gall)	Xanthoxylum bungei. Litchi sp.
Phomopsis citri Pseudomonas citri Sphaeropsis sp	Grape fruit, orange (3), pomelo.
Insect:	
Caryoborus curvipes (weevil)	
COSTA RICA.	Try drangea.
Insect: Apion sp. (Curculionidae) Disease:	Blue vetch.
Torula sp	Phoenix sp. (seed).
Insect: Lasioderma serricorne (cigarette beetle)	Pamara acad
Diseases: Colletotrichum sp	
Fusarium sp	Oreodoxa regia (seed).
Insect: Bruchus sp. (weevil)	Caesalpinia coriaria (seed).
Insect:	
Aspidiotus lataniae (scale insect)	_
Cladosporium sp	Ilex paraguayensis.
Insects:	
Apatela auricoma (dagger moth). Diaspis pentagona (West Indian peach scale)	Peach trees.
Emphytus cinctus (sawfly) Lecanium persicae (scale insect)	Peach trees.
Notolophus antiqua (European tussock moth) (egg mass) Pseudococcus sp. (mealybug)	Crataegus.
Slugs (Mollusca)	
Botrytis sp. Nectria cinnabarina.	Rose.
FRANCE.	
Insects: Apatela auricoma (dagger moth). Aspidiotus hederae (ivy scale)	Apple seedlings, cherry (2). Beschorneria bracteata. Apple stock.
Coleophora sp. (Elachistidae)	Do. Rose.
Emphytus cinctus (sawfly) Euproctis chrysorrhoea (brown-tail moth) (nest) Harpalus sp. (Carabidae)	Apple stock (2).
Lecanium persicae (scale insect) Lecanium pulchrum (scale insect)	Pear stock. Gooseberry.

Country of origin and name of pest.	Host.
FRANCE—continued.	
nsects—Continued. Lepidosaphes ulmi (oyster-shell scale). Lycaenid. Notolophus antiqua (European tussock moth) (egg mass). Papilio glaucus var turnus (Papilionidae). Pieris brassicae (imported cabbage worm). Pontia rapae (imported cabbage worm) (pupa). Sesia tipuliformis (imported currant borer). Zeuzera pyrina (leopard moth). Diseases: Bacterium tumefaciens (crown gall). Puccinia graminis.	Apple stock. Althea sp., Apple stock, Pear seedlings. Cherry. Fruit stock, Gooseberry. Rose. Ribes sp. Apple stock. Apple stock, Rose.
GRENADA, BRITISH WEST INDIES.	In packing.
Insect: Targionia hartii (Hart scale)	Colocasia esculenta.
GUATEMALA. Insects:	
Aspidiotus ataniae (scale insect). Aspidiotus perniciosus (San Jose scale). Aspidiotus subsimilis (scale insect). Aspidiotus sp. (scale insect). Ceroplastes floridensis (scale insect). Chrysomphalus personatus (masked scale). Chrysomphalus sp. (scale insect). Conotrachelus sp. (Curculionidae). Cynipid. Diaspis sp. (scale insect). Howardia biclavis (mining scale). Orthezia sp. (scale insect). Pyralid larvae. Solenococcus sp. (scale insect). Stenoma sp. (Stenomatidae). Thrips. Toumeyella sp. (scale insect). Diseases: Cephalothecium sp. Colletotrichum gloeosporioides. Colletotrichum sp. Hormiscium sp. Penicillium. Rhizopus sp.	Persea americana. Persea americana, Persea sp. Malpighia, Persea americana, Persea sp.(3). Persea sp. (2). Persea americana. Persea sp. Persea sp. (seed). Persea americana (2). Malpighia, Shrub. Nephrolepis. Persea sp. (seed). Persea sp. Persea sp. (seed). Persea sp. Persea sp. Persea sp. (seed). Do. Persea americana, Persea sp. Malpighia, Persea sp. Malpighia, Persea sp. (seed). Persea gratissima, Persea sp. Coyo seed.
HAITI. Disease:	٥
Helminthosporium sp	Oryza sativa.
HAWAII. Insects: Diaspis pentagona (West Indian peach scale) Phycitid larva Diseases: Colletotrichum sp Melanconium sacchari	Sapindus oahuensis. Pandanus rockii.
HOLLAND.	
Insects: Aulacaspis rosae (rose scale) Emphytus cinctus (sawfly) Eumerus strigatus (lesser bulb fly) Gracilaria zachrysa (leaf miner).	Do. Nacrissus bulbs

Country of origin and name of pest.	Host.
HOLLAND—continued.	
Insects—Continued. Lepidosaphes ulmi (oyster-shell scale) Leptobyrsa explanata (Tingitidae) Leptobyrsa rhododendri (Tingitidae) (eggs) Malacosoma disstria ("forest tent caterpillar") (egg mass) Merodon equestris (narcissus fly) Monarthropalpus buxi (box leaf miner) Notolophus antiqua (European tussock moth) (egg mass) Psylla buxi (box psylla). Diseases: Aspergillus sp Bacterium tumefaciens (crown gall) Botrytis cinerea Botrytis sp Fusicoccum sp Labiella sp Mucor Penicillium.	Rhododendron. Rhododendron (2). Amygdalus. Narcissus bulbs. Boxwood. Rose. Boxwood (18). Hyacinthus orientalis. Rhododendron, Rose. Ornamental (Scotch brown), rose. Aucuba japonica, Rose. Cytisus vossi. Rhododendron. Hyacinthus orientalis. Hyacinthus orientalis. Hyacinthus orientalis (2).
Pestalozzia sp	Rhododendron.
Tubercularia cinnabarina Volutella buxi Zythia striaeformis	Boxwood.
INDIA.	
Disease: Phyllosticta sp	Sorghum.
IRELAND.	
Insect: Emphytus cinctus (sawfly)	Rose.
JAMAICA.	
Insects: Ataenius gracilis (Scarabaeidae) Pyralid larva	Smilax officinalis. Grapefruit seed.
JAPAN.	
Insects: Aspidiotus sp. (scale insect). Bagworm. Ceroplastes rubens (scale insect). Ceroplastes sp. (scale insect). Chionaspis wistariae (wistaria scale). Chionaspis sp. (scale insect). Chionaspis sp. (scale insect). Chrysomphalus sp. (scale insect). Cicada eggs. Diaspis pentagona (West Indian peach scale). Euwallacea sp. (Cryphalinae). Gelechiid. Hemichionaspis aspidistrae (aspidistra scale). Leucaspis japonica (scale insect). Parlatoria pergandei theae (scale insect). Parlatoria proteus (scale insect). Parlatoria sp. (scale insect). Parlatoria sp. (scale insect). Pseudaonidia duplex (scale insect). Pseudaonidia paeoniae (scale insect). Pseudaonidia paeoniae (scale insect). Pseudococcus sp. (mealybug). Pulvinaria sp. (scale insect). Diseases: Cladosporium citri.	Japanese persimmon. Do. Wistaria. Wistaria (2). Wistaria. Aspidistra. Persimmon (2). Prunus. Taro. Juniperus chinensis. Aspidistra (2). Persimmon. Persimmon. Persimmon, prunus mymc. Privet sp. Camellia, Osmonthus. Azalea (3), camellia (2), persimmon. Peony. Bamboo, persimmon. Persimmon. Citrus limonia, Citrus sinensis.
Cladosporium sp.	Prunus.
Diplodia sp	Colocasia kinukatsugi.

Country of origin and name of pest.	Host.
JAVA.	
Insects: Araecerus fasciculatus (coffee-bean weevil)	Corn. Do.
MAURITIUS. Diseases: Colletotrichum falcatum	Saccharum sp.
Melanconium sacchari	Do.
Insects:	
Pentatomid	"Guate" seed. Rixophora mangle tanante.
Colletotrichum gloeosporioides Macrophoma sp. Phyllosticta sp.	Vanilla pompona. Vigna sesquipedalis. Do.
Rhizopus sp.	Sechium edule.
NEW ZEALAND. Insect:	
Curculionid, subfamily Erirhinini	Dracophyllum latifolium.
PANAMA.	•
Insects: Phelomerus ochropygus (Bruchidae). Sitodrepa panicea (Ptinidae) (larva).	Canafestula. Zarzaparilla.
PERU. Insects:	
Calandra oryza (rice weevil)	Corn. Do.
PHILIPPINE ISLANDS.	
Diseases: Cytosporella sp Dothiorella sp Syncephalis sp	Rosa montana. Mabolo cuttings. Aleurites nuts.
PORTO RICO.	
Insects: Coccus sp. (scale insect) Ripersia sp. (scale insect)	Agave sisalana. Do.
Diseases: Colletotrichum spFusarium sp	Agave sisalana. Permentiera cereifera. Pachyrhizus angulatus.
SCOTLAND.	
Insect: Chionaspis salicis (willow scale of Europe)	On support in packing box.
SPAIN. Disease: Pestalozzia neglecta	Ceratonia Siliqua.
ŭ	Octavonia omiqua.
Insect: Calandra oryza'(rice weevil)	Corn.
TAHITI-NOUI, SOCIETY ISLANDS.	•
Diseases: Aspergillus sp Penicillium	Barringtonia speciosa (seed . Do.

Country of origin and name of pest.	Host.
URUGUAY.	4.
Ustilago nuda.	Hordeum vulgare.
VENEZUELA. Insects: Calandra oryza (rice weevil)	Do.

LIST, BY STATES, OF PESTS COLLECTED AND REPORTED FROM DEC. 31, 1917, TO MAR. 31, 1918, INCLUSIVE.

State in which collected and name of pest.	Host.	Country of origin.	Collector.
CALIFORNIA.			
Insects: Aspidiotus sp. (scale insect)	Flowering peach	Japan	G. R. Wilson.
Bagworm	Japanese persimmon	do	Do.
Ceroplastes rubens (scale insect)	do	do	D. P. T. Macdonald.
Ceroplastes sp. (scale insect)	Wistaria	do	Do.
Chionaspis wistariae (wistaria	do	Japan (2)	Do.
scale). Chionaspis sp. (scale insect)	do	Janan	Do.
Chrysomphalus sp. (scale insect)	Aspidistra	ldo	G. R. Wilson.
Cicada eggs	Persimmon	do	F. Ferguson.
Do	do	do	
Euwallacea sp. (Cryphalinae)	Taro	do	L. A. Whitney.
Hemichionaspis aspidistrae (aspidistra scale).	Aspidistra	1 1	
Parlatoria proteus (scale insect)	Privet sp.	Japan	Do.
Parlatoria sp. (scale insect)	Camellia	do	Do. G. R. Wilson.
Do Pseudaonidia duplex (scale insect).	OsmonthusAzalea	ao	D P T Macdonald
Do	do	Janan (2)	D. P. T. Macdonald. G. R. Wilson.
Do	Camellia	Japan (2)	Do.
Pseudaonidia paeoniae (scale in-	Peony	do	Do.
sect).		_	_ `
Pseudococcus sp. (mealybug)	Bamboo		Do.
Do	Persimmon	do	Do.
Disease: Cladosporium citri	Citrus limonia	do	Frederick Maskew.
Do	Citrus sinensis	do	Do.
D0	·		_ 0.
CONNECTICUT.			
Insects: Chionaspis salicis (willow scale of	On support in packing box	Scotland	O S Lowry
Europe).	On support in packing box	DCOMand	Q. D. Lowly.
Diprion simile (pine sawfly) (co-	Rose	France	Do.
coon). Emphytus cinctus (sawfly)	Fruit tree stock	do	M. P. Zappe.
Do	Rose	England	Do.
Do	do	Holland	B. H. Waldon.
Lepidosaphes ulmi (oyster-shell	Boxwood	do	M. P. Zappe.
scale).	_	_	W 73 75 144
Monarthropalpus buxi (box leaf	do	do	W. E. Britton.
miner).	Rose	E-man an	O S Towns
Pontia rapae (imported cabbage	Rose	r rance	Q. S. Lowry.
worm) (pupa). Disease:			
Bacterium tumefaciens (crown	Rose	France	Q. S. Lowry.
gall).			•
8			
DISTRICT OF COLUMBIA.			
Insects:			
Alphitobius piceus (Tenebrion-	Cotton seed	Brazil	H. L. Sanford.
idae).	DI	O-to Di-	Do
Apion sp. (Curculionidae)	Blue vetch	Toyo	Do. Do.
Araecerus fasciculatus (coffee-bean weevil).	Officialita usafamensis	vava	D 0.

List, by States, of pests collected and reported from Dec. 31, 1917, to Mar. 31. 1918, inclusive—Continued.

(The number in parentheses following name of country indicates the number of times reported if collected more than once.)

State in which collected and name of pest.	Host.	Country of origin.	Collector.
DISTRICT OF COLUMBIA—continued.			
sects—Continued.	,		
Aspidiotus hederae (ivy scale)	Beschorneria bracteata	France	E. R. Sasscer.
Aspidiotus lataniae (scale insect)	Acocanthera spectabilis	Egypt	H. F. Dietz.
Do	Persea americana	Guatemala	H. L. Sanford
Do	Persea sp	Guatemala (2)	Do.
Aspidiotus ostreaeformis (scale insect).	Apple stock	France	H. F. Dietz.
Aspidiotus perniciosus (San Jose scale).	Persea americana	Guatemala	H. L. Sanford.
	do	do	J. R. Horton.
Do	Persea sp	do	H. L. Sanford.
Aspidiotus sp. (scale insect)	Malpighia		H. F. Dietz.
Do	Persea americana	do	J. R. Horton.
Do	Persea sp	do	H. L. Sanford.
Do			D. G. Tower.
Ataenius gracilis (Scarabaeidae)	Smilax officinalis		H. L. Sanford.
Bruchus chinensis (weevil)	Beans		Do.
Bruchus sp. (weevil)	Caesalpinia coriaria (seed)	Curacao, D. W. I	J. R. Horton.
	Stryplinodendron stenocarpa	Brazil	H. L. Sanford.
Calandra oryza (rice weevil)	Corn		Do.
Do	do		
			Do.
Do			Do.
Do			Do.
Do			Do.
Carpophilus dimidiatus (Nitidulidae).	Cotton seed		Do.
Caryoborus curvipes (weevil)	Attalea sp. (seed)		Do.
Catorama sp. (Ptinidae)	Cotton seed		Do.
Ceroplastes floridensis (scale insect).	Persea sp	Guatemala	Do.
	do		D. G. Tower.
Chionaspis citri (scale insect)	Citrus	China (2)	H. L. Sanford.
Chrysomphalus personatus (masked scale).	Persea americana	Guatemala	J. R. Horton.
Chrysomphalus sp. (scale insect)	Persea sp	do	D. G. Tower.
Coccus hesperidum (soft brown scale).	Citrus		E. R. Sasscer.
Coccus sp. (scale insect)	Agave sisalana	Porto Rico	H. L. Sanford.
Coleophora sp. (Elachistidae)	Apple stock		
Conotrachelus sp. (Curculionidae)	Persea sp. (seed)		
Curculionid, subfamily Erirhinini.	Dracophyllum latifolium	New Zealand	H. F. Dietz.
Cynipid	Persea sp	Guatemala	H. L. Sanford.
Diaspis pentagona (West Indian peach scale)	Litchi	Hawaii	Do.
Do	do	do	E. R. Sasscer.
Do	Prunus	China	H. L. Sanford.
Do		do	H. F. Dietz.
Diaspis sp. (scale insect)	Echinopsis sylvestri	Argentina	D. G. Tower.
Do	Persea americana	Guatemala	J. R. Horton.
Do	do	do	H. L. Sanford.
Echocerus maxillosus (Tenebrionidae).	Corn		
Eumerus strigatus (lesser bulb fly).	Narcissus bulbs	Holland	Do.
Euproctis chrysorrhoea (browntail moth) (nest).	Apple stock		
Gelechiid	Juniperus chinensis	Japan	Do.
Harpalus sp. (Carabidae)	Cherry stock		
Howardia biclavis (mining scale)	Malpighia		
Do	Shrub	do	
Laemophloeus minutus (Cucujidae)	Cotton seed		
Lasioderma serricorne (cigarette	Papaya seed		

List, by States, of pests collected and reported from Dec. 31, 1917, to Mar. 31, 1918, inclusive—Continued. (The number in parentheses following name of country indicates the number of times reported if collected more than once.)

State in which collected and name of pest.	Host.	Country of origin.	Collector.
DISTRICT OF COLUMBIA—continued.			
sects—Continued.			
Lecanium corni (European fruit Lecanium).	Ribes rubrum	Canada	H. L. Sanford.
Lecanium persicae (scale insect)	Pear stock		Do.
Lecanium pulchrum (scale insect).	Gooseberry		Do.
Lepidosaphes beckii (purple scale). Lepidosaphes ulmi (oyster-shell	Citrus		Do. Do.
scale).	hppic stock	Tranco	ъо.
Do	Gooseberry	do	H. F. Dietz.
Do	Plum stock	do	H. L. Sanford.
Do	Ribes rubrum	Çanada	Do.
Leucaspis japonica (scale insect)	Persimmon	Japan Brazil	Do.
Lophocateres pusillus (Siamese grain beetle).	Cotton seed	brazii	Do.
Lycaenid	Apple stock	France	Do.
Merodon equestris (narcissus fly).	Narcissus bulbs.	Holland	
Orthezia sp. (scale insect)	Nephrolepis	Guatemala	H. L. Sanford.
Parlatoria pergandei (chaff scale)	Citrus	China	E. R. Sasscer.
Parlatoria pergandei theae (scale	Persimmon	Japan	H. L. Sanford.
$egin{array}{c} ext{insect}). \ ext{Do} $	Prunus myme	do	Do.
Pectinophora gossypiella (pink	Cotton seed.	Brazil	Do. Do.
bollworm).	Cotton seed	Diwaiii	20.
Pentatomid	"Guate" seed	Mexico	H. F. Dietz.
Phelomerus ochropygus (Bruchi-	Canafestula	Panama	E. R. Sasscer.
dae).		o1 :	TT T G . 1
Phenacaspis sp. (scale insect)	Acer trifidum	China Hawaii	H. L. Sanford. J. R. Horton.
Phycitid larvaPieris brassicae (imported cabbage	Gooseberry	France	
worm).	Gooseberry	Trance	II. D. Samord.
Pseudaonidia duplex (scale insect).	Persimmon	Japan	Do.
Pseudaonidia paeoniae (scale in-	Acer trifidum	China	Do.
sect).	Dimenham manala tananta	Marrian	Do.
Pseudaonidia tesserata (scale insect).	Rixophora mangle tenante	Mexico	ью.
Psocid eggs	Eucommia ulmoides	China	E. R. Sasscer.
Pulvinaria sp. (scale insect)		Japan	
Pyralid larva	Grapefruit seed	Jamaica	Do.
Do	Persea sp. (seed)	Guatemala	
Rhynchophorus sp. (Calandridae).	Jaboticaba seed	Brazil Porto Rico	H. L. Sanford. Do.
Ripersia sp. (scale insect)	Agave sisilanaLilium sp	China	D_0 .
Sciara sp. (Mycetophilidae)	do	do	
Sesia tipuliformis (imported cur-	Ribes sp	France	Do.
rant borer)			
Sitodrepa panicea (Ptinidae)	Zarzaparilla	Panama	H. F. Dietz.
(larva). Sitotroga cerealella (Angoumois	Corn	Java	H. L. Sanford.
grain moth).	Corn	Java	ii. D. Damord.
Solenococcus sp. (scale insect)	Persea sp	Guatemala	H. F. Dietz.
Spermophagus sp. (Bruchidae)	Acacia sp	Venezuela	H. L. Sanford.
Spermophagus sp. (Bruchidae)	Cercidium viride		
Stenoma sp. (Stenomatidae)			
Tenebroides sp. (Trogositidae) Thrips			
Toumeyella sp. (scale insect)	Persea americana	do	Do.
Do	Persea sp	do	D. G. Tower.
Tribolium confusum (confused	Corn	Venezuela	H. L. Sanford.
flour beetle).	Cotton	China	H. F. Dietz.
Do Tribolium ferrugineum (rust-red	Corn		
flour beetle).			II. II. Nullivia.
Do			
Do	Cotton seed	Brazil	Do.
Trigonogenius globulum (Ptinidae)	Corn	Peru	Do.

List, by States, of pests collected and reported from Dec. 31, 1917, to Mar. 31, 1918, inclusive—Continued.

(The number in parentheses following name of country indicates the number of times reported if collected more than once.)

State in which collected and name of pest.	Host.	Country of origin.	Collector.	
DISTRICT OF COLUMBIA—continued.				
Digongoge		-		
Diseases: Aspergillus sp	Barringtonia speciosa (seed).	Tahiti-Noui, So-	C. H. Kauffman.	
Do	Hyacinthus orientalis	ciety Islands. Holland	J. T. Rogers.	
Bacterium phaseoli	Phaseolus sp	Australia	A. H. Gilbert.	
Botrytis sp.	Aucuba japonica	Holland	J. T. Rogers.	
Do	Rose	do	Do.	
Cephalothecium sp	Malpighia	Guatemala	R. Kent Beattie.	
Do	Persea sp. (seed)	do	C. H. Kauffman.	
Cladosporium sp	Ilex paraguayensis	Egypt	R. Kent Beattie.	
Do	Prunus	Japan	C. H. Kauffman.	
Coleosporium xanthoxyli	Xanthoxylum bungei	China	Do.	
Colletotrichum falcatum	Saccharum sp	Mauritius	J. T. Rogers.	
Colletotrichum gloeosporioides	Persea gratissima	Guatemala	A. H. Gilbert.	
Do	Persea sp	do	J. T. Rogers.	
Do	Vanilla pompona	Mexico	A. H. Gilbert.	
Colletotrichum sp Do	Agave sisalana	Porto Rico	Do.	
Do	Ananas sp Oreodoxa regia (seed)	Cubado	J. T. Rogers. G. R. Lyman.	
Do	Pandanus rockii	Hawaii	J. T. Rogers.	
Do	Parmentiera cereifera	Porto Rico	W. H. Weston.	
Do	Persea sp.	Guatemala	J. T. Rogers.	
Cryptosporella sp	Eleocarpus reticulatus	Australia	Do.	
Cytosporella sp	Rosa montana	Philippine	Do.	
, I		Islands.		
Cytosporina sp	Litchi sp	China	C. H. Kauffman.	
Diplodia sp	Colocasia kinukatsugi	Japan	A. H. Gilbert.	
Dothiorella sp	Litchi sp	China	Do.	
Do	Mabolo cuttings	Philippine Islands	R. Kent Beattie.	
Fusarium sp	Hydrangea	Colombia	C. H. Kauffman.	
Do Do	Oreodoxa regia (seed)	Cuba	G. R. Lyman.	
Fusicoccum sp.	Pachyrhizus angulatus Cytisus vossi	Holland	J. T. Rogers. Do.	
Helminthosporium sp	Oryza sativa	Haiti	Do. Do.	
Hormiscium sp.	Coyo seed	Guatemala	C. H. Kauffman.	
Do	Ribes sp.	Canada	A. H. Gilbert.	
Labiella sp	Rhododendron	Holland	N. W. Lacey.	
Macrophoma sp	Vigna sesquipedalis	Mexico	C. C. Thomas.	•
Melanconium sacchari	Saccharum sp	Hawaii	J. T. Rogers.	
Do	do	Mauritius	Do.	
Mucor	Hyacinthus orientalis	Holland	C. H. Kauffman.	
Nectria cinnabarina	Ribes sp.	England	G. R. Lyman.	
Penicillium	Barringtonia speciosa (seed).	Tahiti-Noui, So-	C. H. Kauffman.	
Do	Hyacinthus orientalis	ciety Islands. Holland	Do.	
Do	do	do	J. T. Rogers.	
Do.	Persea sp. (seed)	Guatemala	C. H. Kauffman.	
Pestalozzia neglecta	Ceratonia Siliqua	Spain	Do.	
Pestalozzia sp	Rhododendron	Holland	J. T. Rogers.	
Phomopsis citri	Citrus	China	Do	
Phyllosticta sp	Sorghum	India	W. H. Weston.	
Do	Vigna sesquipedalis	Mexico	C. C. Thomas.	
Puccinia graminis	In packing	France	C. H. Kauffman.	
Rhizopus sp	Persea sp. (seed)	Guatemala	Do.	
Do	Sechium edule	Mexico	C. C. Thomas.	
Sphaeropsis sp.	Litchi sp	China	C. H. Kauffman	
Syncephalis sp Torula sp	Aleurites nuts	Philippine Islands	A. H. GHDET.	
Tubercularia cinnabarina	Cytisus vossi	Costa Rica Holland	J. T. Rogers. Do.	
Ustilago nuda.	Hordeum vulgare	Uruguay	Do. Do.	
Zythia striaeformis.	Cytisus vossi.	Holland.		
	-,		21. 17. Hacey.	

List, by States, of pests collected and reported from Dec. 31, 1917, to Mar. 31, 1918, inclusive—Continued.

(The number in parentheses following name of host indicates the number of times reported if collected more than once.)

State in whic . collected and name of pest.	Host.	Country of origin.	Collector.
GEORGIA.			
Insect: Lepidosaphes ulmi (oyster-shell scale). ILLINOIS.	Boxwood	Holland	W. V. Reed.
Insect: Emphytus cinctus (sawfly) Do	Rosedo.	England England (5)	P. A. Glenn. D. E. Gower.
Disease: Bacterium tumefaciens (crown gall).	do		
Indiana. Insect:	_		
Emphytus cinctus (sawfly) Do Do	do	England (2)	J. B. Demaree. R. W. Kelley. Do.
Disease: Bacterium tumefaciens (crown gall).	do	England	J. B. Demaree.
Do	do	do	R. W. Kelley.
IOWA. Insects:			
Apatela auricoma (dagger moth) (pupa).	Cherry	France	H. Ness.
Notolophus antiqua (European tussock moth) (egg mass).	Apple stock	do	Do.
Disease: Bacterium tumefaciens (crown gall).	Rose	England (3)	Do.
KENTUCKY. Insects: Lepidosaphes ulmi (oyster-shell scale.)	Boxwood	Holland (2)	H. R. Niswonger
Notolophus antiqua (European tussock moth) (egg mass).	Althea sp	France	Do.
MASSACHUSETTS.		:	·
Insects: Diaspis pentagona (West Indian peach scale).	Peach trees		•
Lecanium persicae (scale insect) Lepidosaphes ulmi (oyster-shell scale).	Boxwood	Holland	Do. R. H. Allen.
Notolophus antiqua (European tussock moth) (egg mass).	Rose	England	L. H. Taylor.
Do	do	Holland	R. H. Allen.
Bacterium tumefaciens (crown gall).	Rhododendron	do	Do.
NEW JERSEY.			
Insects: Gracilaria zachrysa (leaf miner) Lepidosaphes ulmi (oyster-shell scale).	Azalea		A. S. Nicolay. G. L. Walters.
Leptobyrsa explanata (Tingitidae). Leptobyrsa rhododendri (Tingitidae) (eggs).	Rhododendrondo		A. S. Nicolay. C. A. Schwarze.
Do	Boxwooddo	Holland (12)	H. B. Weiss. A. S. Nicolay. H. B. Weiss.
Diseases: Botrytis cinerea	Ornamental (Scotch Brown).	do	C. A. Schwarze.
Do Volutella buxi	Rose		Do. Do.

List, by States, of pests collected and reported from Dec. 31, 1917, to Mar. 31, 1918, inclusive—Continued.

(The number in parentheses following name of country indicates the number of times reported if collorted more than once.)

State in which collected and name of pest.	Host.	Country of origin.	Collected.
NEW YORK CITY (FEDERAL INSPECTION).			
Insect: Targionia hartii (Hart scale) Hart Diseases:	Colocasia esculenta	Grenada, B. W. I.	D. G. Tower.
Bacterium tumefaciens (crown	Pueraria sp	China	H. B. Shaw.
gall). Pseudomonas citri Do	Grapefruit	do	Do.
Do	Pomelo		Do. Do.
OHIO.			
Apatela auricoma (dagger moth) Do	Apple seedlings		F. D. Hechathorn. Do.
Do	Rose	England	Do.
Euproctis chrysorrhoea (brown-tail moth) (nest).	Apple stock		W. E. Evans.
Lepidosaphes ulmi (oyster-shell scale).	Apple	Holland	Do.
Notolophus antiqua (European tussock moth) (eggs).	Pear seedlings	France	Do.
Papilio glaucus var. turnus (Papilionidae).	Cherry	do	R. Faxon.
Zeuzera pyrina (leopard moth)	Apple stock	do	W. E. Evans.
PENNSYLVANIA. nsects:	,		
Aulacaspis rosae (rose scale) Lepidosaphes ulmi (oyster-shell scale).	Rose	do	G. B. Stichter. W. H. Goodwin.
Do	do	do	F. L. Holdridge.
Do	do	Holland (4)	J. K. Primm. M. E. Shay.
Do	do	Holland (2)	F. M. Trimble.
Malacosoma disstria ("forest tent	Lilac	do Holland	Do. M. E. Shay.
caterpillar") (egg mass). Pieris brassicae (imported cab-	Fruit stock	France	J. G. Sanders.
bage worm). Pseudococcus sp. (mealybug)	Crataegus	England	G. L. Walters.
Psylla buxi (box psylla) Do	Boxwood	Holland (3) Holland	J. K. Primm.
Do		Holland (2)	
Diseases: Bacterium tumefaciens (crown	Apple stock	France	Do.
gall). Do	Rose	England	Do.
Do		Holland	Do.
Botrytis sp	do	England	Do.
EATTLE, WASH. (FEDERAL INSPECTION).			
Pseudomonas citri	Orange	China	A. G. Webb.
WASHINGTON (STATE).			
Diaspis pentagona (West Indian	Prunus	Japan	F. N. Rhodes.
peach scale). Pseudaonidia duplex (scale insect).	Camellia	do	Do.
wisconsin.			
nsect: Slugs (Mollusca)	Rose	England	S. B. Fracker.
Disease:		9	

LIST OF CURRENT QUARANTINE AND OTHER RESTRICTIVE ORDERS.

QUARANTINE ORDERS.

The numbers assigned to these quarantines indicate merely the chronological order of issuance of both domestic and foreign quarantines in one numerical series. The quarantine numbers missing in this list are quarantines which have either been superseded or revoked. For convenience of reference these quarantines are here classified as domestic and foreign.

DOMESTIC QUARANTINES.

Date palms.—Quarantine No. 6: Regulates the interstate movement of date palms or date-palm offshoots from Riverside County, Cal., east of the San Bernardino meridian; Imperial County, Cal.; Yuma, Maricopa, and Pinal Counties, Ariz.; and Webb County, Tex., on account of the Parlatoria scale (Parlatoria blanchardi) and the Phoenicococcus scale (Phoenicococcus marlatti).

Cotton seed and cottonseed hulls.—Quarantine No. 9: Prohibits the importation of cotton seed and cottonseed hulls from the Territory of Hawaii on account of the pink bollworm.

Hawaiian fruits.—Quarantine No. 13: Prohibits or regulates the importation from Hawaii of all fruits and vegetables, in the natural or raw state, on account of the Mediterranean fruit fly and the melon fly.

Sugar cane.—Quarantine No. 16: Prohibits the importation from Hawaii and Porto Rico of living canes of sugar cane or cuttings or parts thereof, on account of certain injurious insects and fungus diseases.

Cotton.—Quarantine No. 23, revised: Regulates the movement of cotton from Hawaii to the continental United States, on account of the pink bollworm.

Gipsy moth and brown-tail moth.—Quarantine No. 27: Regulates the movement interstate to any point outside of the quarantined towns and territory, or from points in the generally infested area to points in the lightly infested area, of stone or quarry products and of the plants and the plant products listed therein. This quarantine covers portions of the New England States.

Five-leafed pines, Ribes, and Grossularia.—Quarantine No. 26: Prohibits the interstate movement of five-leafed pines, currant and gooseberry plants from all States east of and including the States of Minnesota, Iowa, Missouri, Arkansas, and Louisiana to points outside of this area; prohibits, further, the interstate movement of five-leafed pines and black currant plants to points outside the area comprising the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York.

Sweet potato and yam.—Quarantine No. 30: Prohibits the movement from the Territories of Hawaii and Porto Rico into or through any other Territory, State, or District of the United States of all varieties of sweet potatoes and yams (*Ipomoea batatas* and *Dioscorea* spp.), regardless of the use for which the same are intended, on account-of the sweet potato weevil (*Cylas formicarius*) and the sweet potato scarabee (*Euscepes batatae*).

Banana plants.—Quarantine No. 32: Prohibits the movement from the Territories of Hawaii and Porto Rico into or through any other Territory, State, or District of the United States of all species and varieties of banana plants (Musa spp.), regardless of the use for which the same are intended, on account of two injurious weevils, namely, Rhabdocnemis obscurus and Metamasius hemipterus.

FOREIGN QUARANTINES.

Irish potato.—Quarantine No. 3: Prohibits the importation of the common or Irish potato from Newfoundland; the islands of St. Pierre and Miquelon; Great Britain, including England, Scotland, Wales, and Ireland; Germany; and Austria-Hungary on account of the disease known as potato wart.

Mexican fruits.—Quarantine No. 5, as amended: Prohibits the importation of oranges, sweet limes, grapefruit, mangoes, achras sapotes, peaches, guavas, and plums from the Republic of Mexico, on account of the Mexican fruit fly.

Five-leafed pines, Ribes and Grossularia.—Quarantine No. 7, as amended: Prohibits the importation from each and every country of Europe and Asia and from the Dominion of Canada and Newfoundland of all five-leafed pines and all species and varieties of the genera Ribes and Grossularia, on account of the white-pine blister rust.

Cotton seed and cottonseed hulls.—Quarantine No. 8, as amended: Prohibits the importation from any foreign locality and country, excepting only the locality of the Imperial Valley, in the State of Lower California, Mexico, of cotton seed (including seed cotton) of all species and varieties and cottonseed hulls, on account of the pink bollworm. Cotton and cotton seed from the Imperial Valley may be entered under permit and regulation.

Seeds of avocado or alligator pear.—Quarantine No. 12: Prohibits the importation from Mexico and the countries of Central America of the seeds of the avocado or alligator pear, on account of the avocado weevil.

Sugar cane.—Quarantine No. 15: Prohibits the importation from all foreign countries of living canes of sugar cane or cuttings or parts thereof, on account of certain injurious insects and fungus diseases. There are no restrictions on the entry of such materials into Hawaii and Porto Rico.

Citrus nursery stock.—Quarantine No. 19: Prohibits the importation from all foreign localities and countries of all citrus nursery stock, including buds, scions, and seeds, on account of the citrus canker and other dangerous citrus diseases. The term "citrus" as used in this quarantine includes all plants belonging to the subfamily or tribe Citratæ.

European pines.—Quarantine No. 20: Prohibits, on account of the European pine-shoot moth (Evetria buoliana), the importation from all European countries and localities of all pines not already excluded by quarantine No. 7.

Indian corn or maize and related plants.—Quarantine No. 24, as amended: Prohibits the importation from south-eastern Asia (including India, Siam, Indo-China, and China), Malayan Archipelago, Australia, New Zealand, Oceania, Philippine Islands, Formosa, Japan, and adjacent islands, in the raw or unmanufactured state, of seed and all other portions of Indian corn or maize (Zea mays L.), and the closely related plants, including all species of Teosinte (Euchlaena), Job's tears (Coix), Polytoca, Chionachne, and Sclerachne, on account of the downy mildews and Physoderma diseases of Indian corn, except that Indian corn or maize may be imported on compliance with the conditions prescribed in the regulations of the Secretary of Agriculture.

Citrus fruit.—Quarantine No. 28: Prohibits the importation from eastern and southeastern Asia (including India, Siam, Indo-China, and China), the Malayan Archipelago, the Philippine Islands, Oceania (except Australia, Tasmania, and New Zealand), Japan (including Formosa and other islands adjacent to Japan), and the Union of South Africa, of all species and varieties of citrus fruits, on account of citrus canker, except that oranges of the mandarin class (including satsuma and tangerine varieties) may be imported on compliance with the conditions prescribed in the regulations of the Secretary of Agriculture.

Sweet potato and yam.—Quarantine No. 29: Prohibits the importation for any purpose of any variety of sweet potatoes or yams (*Ipomoea batatas* and *Dioscorea* spp.) from all foreign countries and localities, on account of the sweet potato weevils (*Cylas* spp.) and the sweet potato scarabee (*Euscepes batatae*).

Banana plants.—Quarantine No. 31: Prohibits the importation, for any purpose, of any species or variety of banana plants (Musa spp.) from all foreign countries and localities, on account of the banana root borer (Cosmopolites sordidus).

OTHER RESTRICTIVE ORDERS.

The regulation of the entry of nursery stock from foreign countries into the United States was specifically provided for in the plant-quarantine act. The act further provides for the similar regulation of any other class of plants or plant products when the need therefor shall be determined. The entry of the plants and plant products listed below have been brought under such regulation:

Nursery stock.—Nursery stock is entered under regulations requiring a permit, foreign certification and marking, reporting arrival and distribution, and inspection at destination. The term "nursery stock" includes all field-grown florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products for propagation, except field, vegetable, and flower seeds, bedding plants, and other herbaceous plants, bulbs, and roots.

Irish potatoes.—The importation of Irish potatoes is prohibited altogether from the countries enumerated in the potato quarantine. Potatoes may be admitted from other foreign countries in accordance with the order of December 22, 1913, bringing the entry of potatoes under restriction on account of injurious potato diseases and insect pests. The following countries have qualified for the importation of potatoes under the regulations issued under said order: Denmark, Holland, Belgium, Cuba, Bermuda, and the Dominion of Canada. The regulations issued under this order have been amended so as to permit, free of any restrictions whatsoever under the plant-quarantine act, the importation of potatoes from any foreign country into the Territories of Porto Rico and Hawaii for local use only and from the Dominion of Canada and Bermuda into the United States or any of its Territories or districts.

Avocado, or alligator pear.—The order of February 27, 1914, prohibits the importation from Mexico and the countries of Central America of the fruits of the avocado, or alligator pear, except under permit and in accordance with the other provisions of the regulations issued under said order, on account of the avocado weevil. Entry is permitted only through the port of New York and is limited to the large, thick-skinned variety of the avocado. The importation of the small, purple, thin-skinned variety of the fruit of the avocado and of avocado nursery stock under 18 months of age is prohibited.

Cotton.—The order of April 27, 1915, prohibits the importation of cotton from all foreign countries and localities, except under permit and in accordance with the other provisions of the regulations issued under said order, on account of injurious insects, including the pink bollworm. These regulations apply in part to cotton grown in and imported from the Imperial Valley, in the State of Lower California, in Mexico.

Corn.—The order of March 1, 1917 (Amendment No. 1, with Regulations, to Notice of Quarantine No. 24), prohibits the importation of Indian corn or maize in the raw or unmanufactured state from the countries and localities listed in the Notice of Quarantine No. 24, except under permit and in accordance with the other provisions of the regulations issued under said order, on account of injurious diseases of Indian corn.

Cottonseed products.—The order of June 23, 1917, prohibits the importation of cottonseed cake, meal, and all other cottonseed products, except oil, from all foreign countries, and a second order of June 23, 1917, prohibits the importation of cottonseed oil from Mexico, except under permit and in accordance with the other provisions of the regulations issued under said orders, on account of injurious insects, including the pink bollworm.

Citrus fruits.—The order of June 27, 1917 (Notice of Quarantine No. 28, with Regulations), prohibits the importation from the countries and localities listed therein of all species and varieties of citrus fruits, excepting only oranges of the mandarin class (including satsuma and tangerine varieties), on account of the citrus canker disease. Oranges of the mandarin class (including satsuma and tangerine varieties) may be imported under permit and in accordance with the other provisions of the regulations issued under said order.

STATE INSPECTION OFFICIALS.

Alabama: State Horticulturist, Alabama Polytechnic Institute, Auburn, Ala., G. C. Starcher.

Arizona: State Entomologist, Pheonix, Ariz., A. W. Morrill. Arkansas: Chief Inspector, Fayetteville, Ark., J. L. Hewitt.

California: Horticultural Quarantine Officer, Room 11, Ferry Building, San Francisco, Cal., Frederick Maskew.

Colorado: Entomologist, Colorado Agricultural Experiment Station, Fort Collins, Colo., C. P. Gillette.

Connecticut: State Entomologist, New Haven, Conn., W. E. Britton.

Delaware: Secretary, State Board of Agriculture, Dover, Del., Wesley Webb.

District of Columbia: Federal Horticultural Board, U. S. D. A., E. R. Sasscer, Chief Inspector; R. Kent Beattie, Chief Pathological Inspector.

Florida: Inspector of Nursery Stock, Florida Agricultural Experiment Station, Gainesville, Fla., F. M. O'Byrne.

Georgia: State Entomologist, Atlanta, Ga., A. C. Lewis.

Hawaii: Entomologist, Board of Commissioners of Agriculture and Forestry, Honolulu, Hawaii, Edw. M. Ehrhorn.

Idaho: State Horticultural Inspector, Boise, Idaho, Guy Graham.

Illinois: Chief Inspector, Office State Entomologist, Urbana, Ill., P. A. Glenn.

Indiana: State Entomologist, Indianapolis, Ind., Frank N. Wallace.

Iowa: State Entomologist, Iowa State College, Ames, Iowa, R. L. Webster.

Kansas, north: Entomologist, Kansas Agricultural Experiment Station, Manhattan, Kans., Geo. A. Dean.

Kansas, south: Entomologist, University of Kansas, Lawrence, Kans., S. J. Hunter.

Kentucky: State Entomologist, Kentucky Agricultural Experiment Station, Lexington, Ky., H. Garman,

Louisiana: Acting Entomologist, Baton Rouge, La., W. E. Anderson.

Maine: State Horticulturist, Augusta, Me., C. L. Wilkins.

Maryland: State Entomologist, College Park, Md., E. N. Cory.

Massachusetts: State Nursery Inspector, State House, Boston, Mass., R. H. Allen.

Michigan: State Inspector of Nurseries, East Lansing, Mich., L. R. Taft.

Minnesota: State Entomologist, St. Paul, Minn., A. G. Ruggles.

Mississippi: Entomologist, Agricultural College, Miss., R. W. Harned.

Missouri: Entomologist, University of Missouri, Columbia, Mo., Leonard Haseman.

Montana: Montana State Board of Horticulture, Missoula, Mont., A. L. Strausz.

Nebraska: State Entomologist, University of Nebraska, Lincoln, Nebr., Lawrence Brunner.

Nevada: Director, Nevada Agricultural Experiment Station, Reno, Nev., S. B. Doten.

New Hampshire: Acting State Nursery Inspector, Durham, N. H., W. C. O'Kane.

New Jersey: State Entomologist, New Brunswick, N. J., T. J. Headlee.

New Mexico: Horticulturist, New Mexico Agricultural Experiment Station, State College, N. Mex., Fabian Garcia.

New York: Commissioner of Agriculture, Albany, N. Y., Chas. S. Wilson.

North Carolina: State Entomologist, State Department of Agriculture, Raleigh, N. C., Franklin Sherman.

North Dakota: Director, North Dakota Agricultural Experiment Station, Agricultural College, N. Dak., C. B. Waldron.

Ohio: Chief Inspector, Ohio Department of Agriculture, Columbus, Ohio, E. C. Cotton.

Oklahoma: Secretary, State Board of Agriculture, Oklahoma City, Okla., C. E. Sanborn.

Oregon: Secretary, State Board of Horticulture, Portland, Oreg., Henry E. Dosch.

Pennsylvania: Chief Nursery Inspector, Harrisburg, Pa., Enos B. Engle.

Porto Rico: Entomologist, Board of Commissioners of Agriculture, Rio Piedras, P. R., W. V. Tower.

Rhode Island: Assistant Entomologist, State Board of Agriculture, Providence, R. I., J. J. Pillsbury

South Carolina: State Entomologist, Clemson College, S. C., A. F. Conradi.

South Dakota: Entomologist, State College of Agriculture, Brookings, S. Dak., Harry C. Severin.

Tennessee: State Entomologist, Knoxville, Tenn., G. M. Bentley.

Texas: Chief Inspector of Nurseries, Houston, Tex., Ed. L. Ayers.

Utah: State Crop Pest Inspector, Salt Lake City, Utah, J. B. Walker.

Vermont: State Nursery Inspector, Burlington, Vt., Marshall B. Cummings.

Virginia: State Entomologist, Blacksburg, Va., W. J. Schoene.

Washington: Chief, Division of Horticulture, Olympia, Wash., M. L. Dean.

West Virginia: State Entomologist, Morgantown, W. Va., W. E. Rumsey.

Wisconsin: State Entomologist, State Capitol, Madison, Wis., E. D. Ball.

Wyoming: Secretary, State Board of Horticulture, Laramie, Wyo., Aven Nelson.